



MARC – Telecom Hot Topics

TDM Transition and IP
Interconnection Issues

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What is IP Interconnection?



Just like the “Grid” – It’s all about connecting the various networks to deliver the thing – in this case telecom traffic.

It is the protocol used to deliver voice traffic using IP (SIP) rather than TDM (Time Division Multiplexing).

NOT about “www” traffic.

Why Should I Care?

- ❖ Transitions within and between carrier networks.
 - Major issue: Interconnection
- ❖ Transition at the network edge (with customer)
 - Major issues: Power, Special Circuits, Last Mile, Network Equipment
- ❖ Transition to Wireless
 - Major issue: Rural markets
- ❖ Transition in the Public Safety Network



Positions of Parties



AT&T/ Verizon

IP is an “information” service, not a telecom service, and therefore not subject to 251/252.

- It is subject to “commercial” negotiations.
- Parties required to execute NDAs before getting “template”.
- Not subject to state commission review/over-sight or filing requirements.

Internet “peering and transit” contracts demonstrate that commercial negotiations will be successful.

- Internet Peering is relationship between ISPs for exchange of data traffic.
- Level 3 complaints about peering.

Contra View



The Act is technology neutral and section 251(c) interconnection rights extend to (at the least) the exchange of managed VoIP traffic.

The Act provides for negotiation with safeguards: public disclosure, prohibitions on discrimination, opt-in rights and, where needed, arbitration.

- Rural and smaller incumbent local exchange carriers.
- Competitive local exchange carriers.
- Most cable-based providers of telephone services.
- Most wireless carriers.
- Consumer advocates.
- State public utility commissions/ NARUC

Technical Issues - Compensation



- Where should there be interconnection?
- What should be the geographic scope of traffic exchange?
- It's all about Compensation
 - Whether rate free (bill & keep) termination must be offered by ILEC, even to smaller carriers.
 - AT&T proposes Nationwide termination for a price.
 - TA96 provides for reciprocal termination in an agreed area
 - FCC's TDM rules say reciprocal compensation is \$0.
 - Cost of Conversion: If one party isn't delivering to its end user in IP format, who should pay to convert the IP traffic back to TDM?
 - If there are only a handful of POI (points of interconnection), who should pay to deliver the traffic to the POI and at what cost?

Recent Developments – Cases and Conflicts





- ❖ Sprint filed an arbitration with AT&T and include IP Interconnection issue.
- ❖ Commission adopted arbitrators decision that deferred resolution of IP interconnection issue in Docket 12-0550
 - **While the Commission might or might not have the authority to order IP interconnection, this decision cannot be made until it is presented with an IP-to-IP interconnection proposal of sufficient detail to allow it to assess whether such a plan is technically feasible or otherwise comports with the requirements of the 1996 Act.**
- ❖ Sprint Appealed but dropped the IP Interconnection issue from appeal based on Michigan “contingent resolution.”



Suspended

The Indiana Sprint/AT&T proceeding (C/N 44409-INT-01) is effectively stayed to allow the parties time to negotiate a settlement.

On March 4, 2014, the Presiding Officers issued a docket entry granting the request to suspend prehearing activity and to reschedule the arbitration hearing for July 23-24.

Assume this “suspension” was due to Sprint/AT&T settlement in Michigan (see next slide)

Sprint/AT&T Arbitration

C/N 44409-INT-01

Michigan Decision



- ❖ Sprint filed arbitration with AT&T.
- ❖ Commission rejected Arbitrator Decision.
 - ❖ **“The Commission finds that the arbitration panel’s determination on this issue must be reversed. IP interconnection has become an important and prevalent form of interconnection in the telecommunications industry.** TDM-based switching is declining, and the FCC has requested that incumbent local exchange carriers (ILECs) negotiate IP interconnection in good faith. AT&T Michigan argued that it is unable to provide Sprint with IP interconnection because the applicable equipment is owned by a separate, but affiliated, out-of-state company. Sprint disputed this, and asserted that without Commission intervention, it will be forced to use inefficient and expensive TDM technology to the financial detriment of the company. The Commission agrees with Sprint, and finds that pursuant to Commission precedent, federal rules and law, Sprint’s position on this issue should be adopted. **Accordingly, the Commission finds that pursuant to Section 251(c)(2)(A), an ILEC, such as AT&T Michigan, not only must provide, for the facilities and equipment of any requesting telecommunications carrier, interconnection, but also IP interconnection, with the local exchange carrier’s network—for the transmission and routing of telephone exchange service and exchange access.”**
 - ❖ Michigan PSC Orders in Case U-17349 (Mar. 18, 2014 and December 6, 2013)

Michigan Decision – Affiliates and POIs



- ❖ Michigan PSC rejects AT&T's attempt to draw a distinction between the AT&T Michigan and SBC Internet networks.
 - ❖ Arbitrated Language Blending Affiliates: *“Regardless of the AT&T-entity ownership of a given Softswitch, any AT&T-entity owned Softswitch that is available for use by AT&T Michigan to provide Telephone Exchange or Exchange Access voice services, and the facilities that connect such Softswitch to the AT&T Michigan TDM or IP network equipment, is deemed to be part of the AT&T Michigan network.”*
- ❖ Arbitrated Language on Available POIs: *“Any Softswitch (or a network edge router associated with such Softswitch) that is or has been used by AT&T Michigan to provide Telephone Exchange or exchange Access voice services, is a technically feasible point that may be selected by Sprint as the POI....”*
- ❖ “[T]o allow an ILEC to sideslip § 251(c)’s requirements by simply offering telecommunications through a wholly-owned affiliate seems to us a circumvention of the statutory scheme.” *Ascent v. FCC*, 235 F.3d 662, 666 (D.C. Cir. 2001) (cited by Michigan PSC)

Michigan Continued



AT&T and Sprint Filed “Contingent Resolution” Settlement

“Sprint and AT&T Michigan hereby further notify the Commission that (a) the parties have arrived at a contingent resolution of the issue that was designated as Issue 1 in MPSC Case No. U-17349; (b) pursuant to such contingent resolution, the Agreement submitted herewith does not include the language for IP-to-IP Interconnection proposed by Sprint for Issue 1 in that case but, instead, includes the following language in the General Terms and Conditions:

- 3.11.2.2 All traffic that Sprint exchanges with AT&T Michigan pursuant to this Agreement will be delivered in TDM format.
- 3.11.2.2.1 Nothing in this Agreement, including the foregoing section 3.11.2.2, shall be construed to prohibit the Parties from agreeing that Sprint may exchange traffic with AT&T Michigan pursuant to a separate agreement, and nothing herein prohibits Sprint from exchanging traffic with AT&T Michigan in IP format pursuant to such an agreement. And if the contingency upon which the parties’ resolution of Issue 1 depends is not fulfilled, the parties may, on or about July 15, 2014, submit for MPSC review pursuant to section 252(e)(2)(B) of the Telecommunications Act of 1996, an amendment to the ICA including, as arbitrated language, the language for IP-to-IP Interconnection proposed by Sprint for Issue 1 in Case No. U-17349, and providing for the deletion of the language set forth above.

Michigan Continued



On March 18, 2014, the Commission approved the ICA, but rejected the non-conforming IP-to-IP interconnection language (post arbitration “contingent resolution” language) and directed the parties to file a conforming ICA by April 1, 2014.

On April 1, 2014, the Sprint and AT&T filed an ICA that conformed, in its entirety, to the PSC’s December 6 Order, including the arbitrated IP Interconnection language, but AT&T noted its on-going objection.

On April 8, 2014, AT&T filed a brief opposing its own IP-to-IP ICA, and included an affidavit seeking to introduce facts disputing the feasibility of IP interconnection.

The Commission approved the conforming ICA language and refused to consider AT&T’s April 8 affidavit.

Michigan Appeal



AT&T is appealing the PSC's Order, US District Court (Western District Court of Michigan) 14-CV-00416 (filed 4/15/2015).

AT&T's 7 Count complaints include:

1. Unlawful rejection of a negotiated resolution on IP interconnection language post arbitration.
2. Unlawful IP Interconnection language because:
 - a. Section 251 does not require IP interconnection;
 - b. Federal law requires one POI per LATA;
 - c. It requires interconnection with the network of an SBC affiliate;
 - d. It requires access to a superior yet unbuilt network;
 - e. It shifts the costs to AT&T to bear the costs of converting traffic;
 - f. It requires an unreasonable implementation schedule.

Michigan Appeal - Schedule



Parties filed a proposed schedule:

- June 9, 2014 Parties file Joint Appendix
- June 26, 2014 AT&T Michigan files initial brief on the merits of its claims; Sprint files initial brief on the merits of its claims
- August 8, 2014 Commissioners file brief (or two separate briefs) responding to AT&T Michigan and Sprint briefs; AT&T Michigan files response to Sprint's initial brief; Sprint files response to AT&T Michigan's initial brief
- September 8, 2014 AT&T Michigan and Sprint file reply briefs.
- Open Issues – What happens when a CLEC attempts to Opt-into agreement?

AT&T's IP Trials



AT&T has proposed trials to convert services in wire centers from TDM to IP – using a wireless solution involved. (Retail provider/Residential)

What trials may not resolve:

- Trials don't include details on IP products offered to business.
- Trials don't include details on IP products offered at wholesale.
- FCC has said that trials cannot result in disconnections of interconnecting carriers.



Any Questions?

Thank You

